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THE GREAT  
BALANCE-MEASURE SYSTEM,

FOR CUTTING

Coats, Vests, Pants, Cloaks, and Shirts,

WHICH WILL VARY SYSTEMATICALLY TO FIT NINE DIFFERENTLY-  
SHAPED-SHOULDERED MEN, AND PRESERVE AS TRUE A  
BALANCE AS FOR THE MOST PERFECT FORM,

INVENTED BY

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W. BROCKAWAY,

OF NEW YORK,

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PRINTING-HOUSE SQUARE, OPPOSITE CITY HALL.

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## BALANCE-MEASURE SYSTEM.

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Few people are aware—even among those considered masters of the Trade—of the immense labor necessary to produce a new work on Cutting which will excel all others that have been invented. The author, aware of this, hesitated long in the undertaking ; but becoming acquainted with most of the systems of actual measurement, and seeing their inefficiency in establishing the thing aimed at—a good and easy fit—except when used by experienced men ; and finding that those called Division were incorrect in theory as well as in practice, and that no system now in use meets the wants of the practical cutter, and that those that were philosophically correct lacked simplicity to such an extent as to almost preclude the possibility of their being used with safety by men of experience, has induced him, after eighteen years' practice in cutting all kinds of garments to produce a work on cutting superior to all others that have been offered to the public, and which, for simplicity, has never been surpassed.

The knowledge of many will incline them to think these remarks egotistical, and they may be induced to say, as I have said, after examining a number of systems on cutting, that none can be correct for all kinds of shapes, and that the cutter must vary as his judgment dictates to suit irregular forms if he used division ; and if actual measurement, he must recollect how tight and how loose he draws the measure ; and, consequently, there can be no certainty without experience. But the author has observed that, as no

two men are alike in feature, so no two agree in shape, notwithstanding that every man does not need a differently shaped coat any more than every man needs a differently shaped hat or boot. But men of the same size do frequently require a differently shaped coat. One man may be round-shouldered, but neither high nor low; another round and high, another round and low. One is straight, and neither high nor low; another is straight and high, another is straight and low; and another is swayed back, and neither high nor low; another is swayed back and high; another is swayed back and low.

Here are nine differently shaped shouldered coats, and all that it is necessary to know is how to fit to suit every variety of form. There is, of course, a variety of sizes, but if there is any more than these nine differently shaped shouldered men, they do not need the coat cut to fit them, but require the use of wadding to fill up the irregularity, for they are *deformed*.

My system will vary, systematically, to suit those nine differently-shaped shouldered men, and preserve as true a balance as for the most perfect form.

It has been frequently remarked that, if a coat is correctly balanced for a perfect form, it will fit well though it may be two or three sizes too large; but, coats for irregular forms must be the exact size, or there will be no fit to them. But my system will cut coats for all of the differently shaped men, and balance them so true that you can cut them almost any size, and still have them fit elegantly; and you will not fail to notice that this is what is most needed; for, while the individual who stands erect may not be displeased with a snug-fitting coat, still the man who stoops, having been so frequently pinched in scye, that he immediately throws his arms forward, while the one who stands erect, as a usual thing, finds his coat sufficiently loose.

The first five tables on the square are used for draughting vests ; the whole six are used for draughting coats. Instead of the figures being double, they are single on tables 1, 2, and 3 ; the figures run 1, 4, 8, 1, 5, meaning 21, 24, 28, 31, 35 ; on table 4, they run 1, 2, 3, 4, 5, 6, 7, 8, 9, 0, 1, 2, 3, 4, 5, meaning 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35. Tables 5 and 6, they commence at 21 and run to 35 ; on the short arm of the square there are four tables ; at table 1 you notice three sixes, meaning 26, 36, 46 ; second table, three sixes and two ones, meaning 26, 31, 36, 41, 46 ; tables 3 and 4 commencing at 26 and running to 46.

#### DIRECTIONS FOR TAKING THE MEASURE.

1. Measure breast over prominent part.
2.     "     waist.
3.     "     height of collar.
4.     "     from socket bone to bottom of scye.
5.     "     to waist.
6. Back tack.
7. Bottom of skirt.
8. Bring measure from socket bone to hollow of waist.
9. Across shoulder-blade to center of back.
10. To socket bone—this is called Balance Measure No. 1.
11. Bring end of tape in left hand, to center of back, between shoulders, and bring the measure in front of scye, back to same place, about tight enough to sit smooth ; this is called Measure No. 2, or the second balance measure.
12. Width of back.
13. To elbow.
14. To hand.
15. Round the hand and over thumb joint.

## PANTALOON MEASURE.

1. 1 to 3, length of pants.
2. 6 to 8, inside seam.
3. Round the waist.
4. Inside hip.
5. Forward hip.
6. Thigh.
7. Knee.
8. Foot.

## VEST MEASURE.

1. Balance Measure No. 1.
2.     "           "       No. 2.
3. Length of vest from collar seam.
4. To hip joint.
5. Length of roll.

Having measured your customer loose for Balance Measure, you will select table one size less than measure to draught by, if you wish the draught to agree with measure, in cutting body coat, and the same measure overcoat; one size less to cut vest by. In draughting for over surtout or sack, if much wadding is used, select two sizes larger than coat measure.

## BACK, DIAGRAM A.

Line A, is the base line. Apply the measure from 1 to 2, or length of waist; to 3 as back tack; 4 skirt; from 3 to 5 is table 2. Place the corner of square at 1, throw the long arm to 3, and draw line B. From 3 to 10 is table 2, throw long arm of square to 10, and draw line C. From 1 to 6 is table 5; 6 to 7 is table 2; draw line D and E square with



line B. From 7 to 8 is table 5, or width of back; 1 to 9 is table 3; draw line F from 8 to 2; measure down line F, table 4, and dot it. Form the shoulder seam, back scye, side seam, and back skirt, according to taste or fashion, and you are ready to cut.

#### FOREPART, DIAGRAM B.

Draw line G and H at top and bottom of back scye; put corner of square at G, and mark on base line, table 4 and table 6; from 4 to 5 is table 2; from G to 6 is table 4, or 5 and 4; from 7 on back, from G to I, is table 5, or the distance from 1 to 6 on back, from which you will draw line I. Lay your square at bottom of line in front of scye, and measure table 6 to 8 on line I. From 8 to 9 is tables 4 and 2, from 9 draw line J; from 9 to 10 is tables 4 and 2; from 7 to 10 is table 5, or the size of breast, adding about 3 inches for a person of medium size, for fullness over the breast. On line K to 12, table 4 to 13, table 3. Lay line B of back to 13 and 8, and form neck gorge, scye, and shoulder-seam, taking table 1 off at lower shoulder point, and shaping it half-way midway shoulder-seam.

From bottom of side-seam to line L, is table 3; from 5 to 14 is table 4; from 2 to 15 is table 4. Draw line M, and form cut-off at waist, and shape the breast according to taste or fashion.

If the man is round-shouldered, or stoops, so that the measure from top of back to bottom of scye is  $\frac{1}{2}$ ,  $\frac{3}{4}$ , or one inch more than table 5, it will throw line I forward the same, pitch point 13 further forward, reduce point 11, and carry point 3 a little nearer the line. Point 12 will be carried the same distance further front, and point 13 carried off the same. By the above plan of draughting, every point is governed by mathematical proportions.

If the person is swayed back  $\frac{1}{2}$ ,  $\frac{3}{4}$ , or 1 inch, all of these points will be reversed.

*To Raise a Coat in Neck without increasing size of Scye or Shoulder.*—As much as you raise point G, carry it forward; point 6 the same; off of lower shoulder point the same. To lower a coat in the neck without decreasing the size of shoulder or scye, all these points will be reversed.

#### SKIRT, DIAGRAM C.

Line A is base line measure length of skirt from 1 to 2; from 1 to 3 is table 3; from 3 to 4, table 5; and 3 to 5, table 2. Draw line from 3 to 5; put corner of square at 4 on line B, and draw line C from 2 to 6, tables 4 and 2. Shape skirt according to taste or fashion, bearing in mind that whatever you drop on point of forepart below line L, you must take off of skirt from 7 to 8.

#### SLEEVE, DIAGRAM D.

Line A is the base line; square line B without moving the square; dot tables 1, 4, 6, from which draw lines C, D, and E; from line E to F, table 5; go out on line B, table 3; C, table 2; D, table 5; go out on line H, table 1. From 1 to 2 on line D, is table 2; mark upper and underside sleeve-head, and form sleeve according to taste or fashion. When a coat is raised in the neck, as indicated by forepart, Diagram B, the sleeve-head will take the form as indicated by letter G, adding table 1 on line D, from 2 to 1. Great care should be taken that the underside of sleeve is not hollowed out too much by line G; if so, the sleeve will seem too short when the customer raises his arm; and also on the forepart, that there be room enough at 2, when the coat

is high; and a little below, when it is low in the neck; if not, the raising of the arm will make the sleeve seem short, even if you cut it almost any length. In measuring on back arm-seam, care should be taken that the sleeve is not measured too much on the round of back-arm; if so, the sleeve will be cut too short, although it may agree with the measure.

#### FROCK-COAT SKIRT.

From 1 to 2, length of skirt; from 2 to 3, tables 2 and 2; go out on line B, half size of waist, adding lappel; draw line from 2 to 4. Lay corner of square at 4, short-arm on line B; draw line C. From 4 to 5 is table 4; from 5 to 6 is table 2. Shape skirt according to taste or fashion, bearing in mind that from 5 to 6 the measure should be carefully applied; and size here should be increased, and only here, if you wish a very full skirt for a large-waisted man.

#### PANTALON, DIAGRAM E.

Line A is base line. Apply measure at 1, extending it to 2 and 3. Draw line B, C, and D; from 3 to 4 is table 4; draw line E; measure length of inside seam, and draw line F; go out on line F, tables 5 and 3; at the point of table 5, put corner of square, and draw line G; measure in on line B,  $\frac{1}{4}$  of waist measure, adding seam; from 4 to 5 is table 3; from 4 to 6 is tables 3 and 1. Draw line from 5 to 7, and 6 to 8; form bottom fork and hip, and you are ready to cut.

#### UNDERSIDE.

Lay the forepart on cloth, as represented, and shape it as represented, from 7 to 9 and 3. From 8 to 10 is table 3;

measure size at knee and foot; add on underside, at waist, one-fourth the difference between size of lower hip and waist, unless the waist is larger, when you take off one-quarter the difference from underside; sweep line H, by the measure, from 7 to 8; sweep line I by the distance from 1 to 8; form seat, inside seam, bottoms and tops, and you are ready to cut. For fair form, the waist should be 1-16 whole upper-hip measure less than the upper hip; and whatever the measure lacks of this, one-fourth of which will be the distance from 11 to 12, also from 13 to 14, and 15 to 16.

#### FOREPART OF VEST, DIAGRAM F.

A is the base line and B the bottom measure up line A, from line B length of vest, deducting table 3. Draw line C, go down on line A, tables 4 and 4, and draw line D; from 1 to 2 is table 4 and 3; from 2 to 3 is tables 4 and 1; from 3 to 4 is table 4; from 3 to 5 is tables 4 and 1. Go out on line D  $\frac{1}{4}$  the size of breast, and draw line E; line F is table 3; from line E, from 6 to 7 on line F is table 4; from 4 to 8 is tables 4 and 2; from 9 to 10 is table 1; from 11 to 12 is table 5, less table 4; 13 to 14, table 2; from 4 to 15, table 3; from 15 to 16  $\frac{1}{4}$ , difference between breast and waist; from 17 to 18, the same. Draw line G and line H; mark shoulder-seam, neck-gorge, roll, scye, side-seam, and you are ready to cut.

#### BACK OF VEST, DIAGRAM G.

Continue line D across back, from forepart to 19, tables 2 and 2; from 19 to 20, tables 4 and 3; from 20 to 21, tables 4 and 2; from 21 to 22, table 4, less 1; from 22 to 24, table 3; mark top shoulder-seam, back scye, side-seam, bottom and back seam, and you are ready to cut. If the

man stoops  $\frac{1}{2}$  inch, you will add it on from 21 to 22; point 4 will be carried forward the same and dropped the same; point 3 dropped the same, and point 5 carried forward the same; point 6 reduced, and the side-seam carried a little nearer the line, just below bottom of scye. If the person is swayed back  $\frac{1}{2}$ ,  $\frac{3}{4}$ , or 1 inch, all these points will be reversed. Form a straight or fair draught.

### FULL CIRCULAR CLOAK, DIAGRAM H.

Let cloth be thrown open, and nap run to the right. Measure length of cloak as from 1 to 2; from 2 to 3 is table 3; sweep length of cloak and neck from 3. Drop point 4, table 1, and you are ready to cut.

### THREE-QUARTER CIRCULAR CLOAK, DIAGRAM I.

Measure length of cloak for full circular, and from 2 to 3 the same; from 3 to 5, table 1; from 5, sweep bottom and neck gore, and drop point 6, and you are ready to cut.

The cloak must have a gore taken out over shoulder, 1 inch by 3, or held tight over each shoulder, about 1 inch fall to keep the cloak from falling off of shoulders.

Wadding should not be used in cloaks to make them warm, as it is injurious to the fit around the shoulders; but, instead, use thick warm flannel for inside lining, or some thick goods for inside lining. See that the neck is not too much hollowed out; if it is, the cloak will sit off at collar-seam.

### DIAGRAM G—SHIRT.

From 1 to 2 is table 4; to 3 is table 6; to 4 is table 4;

to 5 is table 2; from 1 to 6 is table 2; 6 to 7 is tables 5 and 3; from 4 to 8 is tables 5 and 3; from 2 to 9 is table 5; from 9 to 11 is table 2; from 2 to 12, and from 3 to 13, a gusset put in to give ease about the neck. From 10 to 13, an opening left.

#### SLEEVE FOR SHIRT—DIAGRAM.

From 1 to 2 is table 6, less 3; from 2 to 3 is table 3; from 1 to 4 is table 1; from 4 to 5 the cloth is left without a seam; from upper part by 7, and under, by 8.

In measuring for shirt, take size of neck, of breast, and shoulder over body coat, and select balance measure one size less, by which to draught the shirt.



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